Apply Ice to Injuries Early to Prevent Re-injury

While cryotherapy has been helpful as a treatment modality affecting swelling, pain, range of motion, etc., the evidence is insufficient to recommend for or against the use of cryotherapy for secondary prevention of injury (or re-injury) or to speed return to activity. It is recommended that randomized, controlled clinical studies be conducted to assess the efficacy of the application of ice after injury as an injury prevention measure.

Background: Cryotherapy is the topical application of ice for treatment of acute musculoskeletal injuries. When applied intermittently after injury, ice reduces many of the adverse conditions related to the inflammatory or reactive phase of an acute injury (i.e., pain, prolonged immobilization, and reduced range of motion), all of which may extend recovery time. Studies demonstrate that ice will reduce swelling, inflammation, and pain. Ice placed directly over the injured tissue limits the amount of fluids going into the injured area and slows nerve conduction velocity, both of which serve to decrease pain and improve function. Ice is especially effective in the first 24 to 72 hours after injury onset.

Despite the long history of using cryotherapy to control swelling and pain, there are very few randomized, controlled studies providing evidence to substantiate the effect of cryotherapy alone on measures of secondary prevention of injury (reinjury), return to sport participation, return to full activity, or return to full military duty. Several studies have analyzed cryotherapy combined with other therapeutic modalities (i.e., compression, immobilization, elevation, electrical stimulation, etc). Despite the general acceptance of cryotherapy as an effective intervention, evidence on which to base these conclusions is limited. The review of the literature for the effect of cryotherapy alone on return-to-sport-participation metrics shows that cryotherapy may have a positive effect. However, the relatively poor quality of the studies reviewed is of concern.

**Information taken from Joint Services Physical Training Injury Prevention Work Group p. 83-166.

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